

REMARKS

Claims 1, 3-6, 8-18, 21-32, 34-41, 43-50 and 52-57 are pending and at issue in the application with claims 1, 17, 29, 38 and 49 being independent claims. Claim 21 has been cancelled. As a result, 5 independent claims remain in the application as previously paid for, and 49 total claims remain in the application as previously paid for. This response is being timely filed with a one-month extension of time and the requisite extension fee of \$120.00. The applicants believe no additional fee is due. However, the Commissioner is hereby authorized to charge any deficiency in the amount enclosed or any additional fees which may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 13-2855. Reconsideration and withdrawal of the rejections in view of the remarks below is respectfully requested.

Claims 19-21 were objected to as being cancelled, but claim 21 was still provided intact. Claim 21 has now been cancelled. Accordingly, the applicants submit that the objection has been overcome.

Claims 1, 3-6, 8-18, 21-32, 34-41, 43-50 and 52-57 are rejected as unpatentable over Liebowitz et al. (U.S. Patent No. 5,812,545) in view of Ben-Schachar et al. (U.S. Patent No. 6,209,018). The applicants respectfully traverse the rejections.

Each of independent claims 1, 17, 29, 38 and 49 recites a method or system of transmitting data through a communication link, the method or system including, among other things, establishing a plurality of worker objects (or processes) where each of the plurality of worker objects or worker processes is capable of forming and delivering a message to an underlying layer of each of a plurality of communication connections of the communication link. A separate communication connection is associated with each worker object or worker process.

Simply put, the combination of Liebowitz et al. and Ben-Schachar et al. do not disclose or suggest each of the limitations of claims 1, 17, 29, 38 and 49. In particular, neither Liebowitz et al. nor Ben-Schachar et al. disclose the recited worker objects (or processes) and the tasks related to the worker objects (or processes), such as establishing a

worker object for each one of a plurality of communication connections, distributing data amongst the worker objects and forming messages using the worker objects.

Liebowitz et al.

As an initial matter, the action acknowledges that Liebowitz et al. does not disclose establishing a worker object for each one of the plurality of communication connections, distributing data amongst worker objects and forming messages using worker objects (see e.g., action, page 5), while at the same time asserting that Liebowitz et al. discloses these very tasks. However, if Liebowitz et al. does not disclose worker objects, then it is impossible for Liebowitz et al. to disclose tasks involving worker objects, as asserted on pages 3 and 4, for example. Accordingly, Liebowitz et al. either discloses worker object (or processes) and the associated tasks or it does not. As discussed further below, it is clear Liebowitz et al. offers no such disclosure.

Contrary to the assertion of the action, Liebowitz et al. does not implicitly disclose establishing a worker object for each one of the communication connections, distributing data amongst worker objects and forming messages using worker objects. (See action, page 4). In particular, the “agents” of Liebowitz et al. do not correlate to the recited worker objects or worker processes. Instead, the agents correspond to different functions or duties of a network management module (NMM) 78, which is provided in the programmable computing device (PCD) 52 of the terminal 12. (See Figs. 3 and 4, column 8, lines 1-5). In column 8, lines 36-44, Liebowitz et al. discloses that:

... agents are provided to support device monitor and control functions such as collecting status, configure and set parameters for the TDMA modem 54 and the RFT unit 56, configuring port 40 speed and routing tables, collecting alarms, resetting the NMM 78 microcontroller and collecting statistics from the PCD 52, and monitoring and controlling customer equipment connected to the terminal 12.

None of these tasks relate to establishing an agent for each of a plurality of communication connections, distributing data amongst the agents or forming messages using the agents, as compared to establishing a worker object for each communication connection, distributing data amongst worker objects and forming messages using worker objects.

Indeed, the agents of Liebowitz et al. only relate to communications between the terminal 12 and a network management center (NMC) 13, and do not relate to communications between the terminal 12 and the satellite 14. The action cites various portions of Liebowitz et al. as disclosing: establishing a worker object for each communication connection (citing Fig. 4, column 4, lines 15-29, 37-39 and 51-54); distributing data amongst worker objects (citing Fig. 4, column 4, lines 32-47); and forming messages using the distributed data in the worker objects (column 4, lines 52-67). Each of these citations relates to the communications between the terminal 12 and the satellite 14 (i.e., “processing data flow and functions performed within the PCD 52”, “Frame Handler modules 64 to support different formats and a multiplicity of communication ports 40”, “FAD 66 preferably creates an outgoing data queue corresponding to each user access device for storing data received therefrom”, “collection of fragments is called the payload”, “a payload header ... which identifies the location of each fragment in the payload”). However, none of these citations mention, much less utilize, the agents in the manner asserted by the action. In other words, to the extent the action cites the communication between the terminal 12 and the satellite 14 as disclosing the tasks associated with the recited worker objects, the agents are not involved with such communication, and, therefore, cannot be associated with the tasks that are associated with the recited worker objects.

Instead, the agents are only used for the communication between the terminal 12 and the NMC 13. As explicitly disclosed in Liebowitz et al., the NMM 78 of the terminal 12 communicates with the NMC 13. (See column 8, lines 4-17). The NMM 78 is not involved in the communications between the terminal 12 and the satellite 14. Fig. 1 of Liebowitz et al. shows that communication between the terminal 12 and the NMC 13 is provided on the “back-end” of the system 10, such that communication between the NMM 78 and the NMC 13 is separate and distinct from communication with the satellite 14. As such, the functions and duties of the NMM 78 are in relation to communication with the NMC 13, and each function or duty of the NMM 78 is defined in an agent. (See column 8, lines 36-37). As a logical consequence, even if the agents could be considered worker objects or worker processes, it is impossible for the cited portions of Liebowitz et al. to disclose the tasks associated with the recited worker objects (e.g., establishing a worker object for each

communication connection, distributing data amongst worker objects and forming message using the worker objects), because the cited portions relate to communications between the terminal 12 and the satellite 14 which do not involve the agents. Further, to the extent the agents are used to communicate with the NMC 13, the tasks associated with the agents do not include the tasks associated with the recited worker objects.

Accordingly, while individual aspects of Liebowitz et al. may appear to disclose various features of independent claims 1, 17, 29, 38 and 49, Liebowitz et al. does not disclose the same arrangement of the features as provided in independent claims 1, 17, 29, 38 and 49, because there is no aspect of Liebowitz et al. that corresponds to the recited worker objects (or processes). In other words, the agents of Liebowitz et al., and the tasks associated therewith, do not correspond to the recited worker objects (or processes), and the tasks associated therewith. As a result, Liebowitz et al. does not disclose the tasks involving the worker objects or worker processes, either explicitly as acknowledged by the action or implicitly as demonstrated above, and the action has offered no motivation to modify Liebowitz et al. in the manner necessary to disclose the agents as the recited worker objects (or processes).

Ben-Shachar et al.

Likewise, Ben-Shachar et al. does not disclose or suggest establishing worker objects for each one of the communication connections, distributing data amongst the worker objects and forming messages using the worker objects. In particular, the “workers” of Ben-Shachar et al. do not correlate to the recited worker objects or worker processes. Ben-Shachar et al. only discloses workers 92, 94, 96 which encapsulate a resource. In particular, a service object 90 uses the workers 92, 94, 96 to encapsulate a resource on a server 88. (See column 8, lines 11-32). In column 8, lines 13-25, Ben-Shachar et al. discloses that:

... the workers 92, 94, and 96 each export an interface of operations that includes executing an SQL statement or a stored procedure. The workers 92, 94, and 96 also manage the connections to the RDBMS resource. In some embodiments, the workers 92, 94, and 96 encapsulate any connection state, cache execution results, and perform cursor-based lookups (e.g., maintain state on behalf of the connection). Further, in some embodiments, the workers 92, 94, and 96 are implemented as a class in C++ or JAVA that derives directly

from a class of the service framework that provides all the capabilities of the service framework (e.g., workload balancing, fault tolerance, etc.).

As plainly recited above, the workers 92, 94, 96 of Ben-Shachar et al. export an interface of operations, manage connections, encapsulate connection states, cache expectation results, balance workloads, etc. None of these tasks relate to distributing data amongst the workers or forming messages using the workers. Although the workers 92, 94, 96 are “established,” there is no disclosure that the workers 92, 94, 96 are established *for each one of a plurality of communication connections*. Simply because Ben-Shachar et al. discloses a feature with the moniker “worker” does not mean the workers 92, 94, 96 are the same as the recited worker objects, particularly where the workers 92, 94, 96 are not associated with any of the same tasks as the recited worker objects.

As with Liebowitz et al., Ben-Shachar et al. does not disclose the same arrangement of the features as provided in independent claims 1, 17, 29, 38 and 49, because there is no aspect of Ben-Shachar et al. that corresponds to the recited worker objects (or processes). The workers of Ben-Shachar et al., and the tasks associated therewith, do not correspond to the recited worker objects (or processes), and the tasks associated therewith. As a result, Ben-Shachar et al. does not disclose the tasks involving the worker objects or worker processes.

Motivation to Combine

None of claims 1, 3-6, 8-18, 21-32, 34-41, 43-50 and 52-57 are rendered obvious over Liebowitz et al. and Ben-Shachar et al., because a person of ordinary skill in the art would not be motivated to combine the teachings of Liebowitz et al. and Ben-Shachar et al. as asserted in the action. It is clear that the obviousness can only be established by identifying a reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. See MPEP 2143.01. Not just any reason will do. If the asserted motivation does not provide a reason for combining Liebowitz et al. and Ben-Shachar et al. in the same manner as recited in the claims, then it cannot be obvious to combine the references.

The motivation provided by the action (i.e., “to provide an improved method and apparatus for providing a service framework for a distributed object network system”) does

not suggest the desirability of providing worker objects or worker processes with the mesh satellite communication system of Liebowitz et al. Indeed, the portion of Ben-Shachar et al. cited in the action (column 3, lines 26-28) reads as follows:

The present invention provides an improved method and apparatus for providing a service framework for a distributed object network system.

This passage clearly states that the improvement, which involves the workers 92, 94, 96, relates to distributed object network systems.

Simply put, there is no reason a person of ordinary skill in the art would use the workers of Ben-Shachar et al. to provide an improved method and apparatus for providing a service framework for a distributed object network system, when Liebowitz et al. has nothing to do with a distributed object network system. Instead, Liebowitz et al. relates to a mesh satellite communication system. It is well understood that a distributed object network system refers to a system whereby software components (often in different computer languages that run on different computers) are able to work together, which is entirely non-analogous to a mesh satellite communication system that transmits voice, video and data from one terminal to another. (See e.g., Liebowitz et al., abstract). For example, there is nothing to suggest that the terminals 12 and/or the satellite 14 of Liebowitz et al. each comprise software components that are written in different computer languages, as would be the case with the system of Ben-Shachar et al. and the problem that Ben-Shachar et al. attempts to address with the above-quoted service framework. As such, it does not stand to reason that one would use workers designed to improve communication between software components of different computer languages within a mesh satellite communication system that does not involve different computer languages within or between the terminals 12 and the satellite 14. It therefore follows that the asserted motivation would not offer a reason to a person of ordinary skill in the art to combine the elements of Liebowitz et al. and Ben-Shachar et al. in the manner claimed (e.g., establishing a worker object for each of the plurality of communication connections, distributing data amongst worker objects, forming messages using worker objects, etc.).

Conclusion

As such, it is clear that neither Liebowitz et al. nor Ben-Shachar et al. disclose or suggest the recited worker objects (or processes) or the associated tasks. It is further clear that the asserted motivation does not provide a reason for a person of ordinary skill in the art to combine Liebowitz et al. and Ben-Shachar et al. in the manner claimed. As such, none of claims 1, 3-6, 8-18, 21-32, 34-41, 43-50 and 52-57 are rendered obvious over Liebowitz et al. and Ben-Shachar et al.

For the foregoing reasons, reconsideration and withdrawal of the rejections of the claims and allowance thereof are respectfully requested. Should the examiner wish to discuss the foregoing, or any matter of form, in an effort to advance this application towards allowance, the examiner is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

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